

Mathematics

Bachelor of Science

Students in the Mathematics program will develop their analytical skills and learn how to work in a problem-solving environment. Advanced modeling, theory and methods make up the foundation of a mathematics degree and allow students to enter the work force or continue their education.

Career Options:

• Education

• Financial Services

Cryptography

Actuarial Science

Biomathematics

Major Requirements:

Calculus I Programming Component course

(3 semester hours): Calculus II **Programming Structures** Multivariate Calculus

Probability and Statistics or other course approved by adviser.

Transition to Advanced Mathematics

Applied Mathematics course Linear Algebra (3 semester hours) from: Abstract Algebra

Analytical Chemistry I w/Laboratory Mathematics Seminar Physical Chemistry I w/Laboratory

Genetics Three of the following elective

mathematics courses: Global Water Issues

Transition to Advanced Mathematics Ecology

Discrete Methods **Ecological Methods** Geometry Corporate Finance Introduction to Complex Variable **Operations Management Elementary Differential Equations Object-Oriented Programming**

Special Topics

12 semester hours of courses in the natural sciences (not including ERS 131, 132, 141, 142, 171, 172 and CHM 101, 102).

MInor Requirements:

Calculus I Calculus II **Elementary Statistics** or Probability and Statistics

Three of the following elective mathematics courses:

Multivariate Calculus Linear Algebra **Number Theory** Abstract Algebra

Discrete Methods Introduction to Complex Variable **Elementary Differential Equations** Geometry **Special Topics**

Transition to Advanced Mathematics

Department Contact:

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Mathematics

General Education Requirements

| I. | Interdisciplinary Requirements | Credits |
|------|--|---------|
| | Ethics | 3 |
| | International Studies | 3 |
| | Total Hours | 6 |
| П. | Science Courses | Credits |
| | Mathematics | 3 |
| | Biology, including lab | 4 |
| | Physics, Earth Science or Chemistry, incl. lab | 4 |
| | Total Hours | 11 |
| III. | Social Science Courses | Credits |
| | History, Political Science | 3 |
| | Communication, Economics, Geography | |
| | or Criminal Justice | 3 |
| | Psychology or Sociology | 3 |
| | Total Hours | 9 |

| IV. Humanities Courses | Credits |
|-------------------------------------|---------|
| Religion | 3 |
| English Composition | 6 |
| Literature | 3 |
| Art, Music or Entertainment/Theatre | 3 |
| Total Hours | 15 |
| TOTAL GENERAL EDUCATION HOURS | 41 |

Unless otherwise specified, transferred credits may be used to fulfill the general requirements at the Registrar's discretion.

| Major | Requirements | Credits | | С | redits |
|--|------------------------------------|---------|--------------------------------------|---------------------------------------|--------|
| MAT 121 | Calculus I | 4 | Programn | ning Component course (3 semester h | ours): |
| MAT 122 | Calculus II | 4 | CIS 211 | Programming Structures | 3 |
| MAT 221 | Multivariate Calculus | 4 | or other course approved by adviser. | | |
| MAT 323 | Probability and Statistics | 3 | | , , , , , , , , , , , , , , , , , , , | |
| MAT 340 | Transition to Advanced Mathematics | 3 | Applied M | Nathematics course (3 semester hours) | from: |
| MAT 403 | Linear Algebra | 3 | | | |
| MAT 404 | Abstract Algebra | 3 | CHM 341 | Analytical Chemistry I w/Laboratory | 3 |
| MAT 427 | Mathematics Seminar | 3 | CHM 342 | Analytical Chemistry I Laboratory | 1 |
| | | | CHM 361 | Physical Chemistry I | 3 |
| Three of the following elective mathematics courses: | | | CHM 362 | Physical Chemistry I Laboratory | 3 |
| Ğ | | | BIO 303 | Genetics | 4 |
| MAT 340 | Transition to Advanced Mathematics | 3 | BIO 330 | Global Water Issues | 5 |
| MAT 318 | Discrete Methods | 3 | BIO 401 | Ecology | 3 |
| MAT 325 | Geometry | 3 | BIO 402 | Ecological Methods | 2 |
| MAT 411 | Introduction to Complex Variable | 3 | BUS 307 | Corporate Finance | 3 |
| MAT 415 | Elementary Differential Equations | 3 | BUS 350 | Operations Management | 3 |
| MAT 495 | Special Topics | 1-6 | CIS 330 | Object-Oriented Programming | 3 |

12 semester hours of courses in the natural sciences (not including ERS 131, 132, 141, 142, 171, 172 and CHM 101, 102).

General Graduation Guidelines:

Total of 120 semester hours, 39 of which must be numbered 300 or 400. (Other programs may require coursework beyond 120 semester hours.) At least 9 semester hours of courses designated as writing intensive.

A declared major.

A cumulative GPA average of C (2.00) and at least a C average in the graduation major.